

REMARKS

Claims 1-23 are pending and have been examined in this application.

Claims 1-9 stand rejected under 35 U.S.C. § 102(b) as being unpatentable over “An HMM-Based Text Segmentation Method Using Variational Bayes Approach and its Application to LVCSR for Broadcast News” by T. Koshinaka *et al.* (“Koshinaka”). Claims 10-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Koshinsaka. Applicant respectfully traverses these rejections and submits that Koshinaka is not prior art to the present application.

Specifically, in order for a publication to qualify as prior art under 35 U.S.C. §102(b), it must have been published more than one year prior to the date that the application for patent was filed in the United States. 35 U.S.C. § 102(b). According to the Notice of References Cited, Koshinaka was published on March 18-23, 2005. The present application, however, has a United States filing date of January 17, 2005 and ultimately claims priority to Japanese Application No. 009144/2004, filed January 16, 2004. Thus, Koshinaka was not published more than one year prior to the date the present application was filed in the United States, and can not qualify as prior art under 35 U.S.C. § 102(b). Moreover, since the present application claims priority to a Japanese application filed on January 16, 2004, Koshinaka can not even qualify as prior art under 35 U.S.C. § 102(a). Accordingly, it is respectfully requested that this rejection be withdrawn.

Claims 1, 3-6, 10-12, 14-17, and 21-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over “Topic Segmentation with an Aspect Hidden Markov Model” by David M. Blei *et al.* (“Blei”) in view of “A statistical model for domain-independent text segmentation,” by Massao Utiyama *et al.* (“Utiyama”). Claims 2, 9, 13 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Blei in view of Utiyama, and further in view of “A Tutorial on Hidden Markov Models and Selected Application in Speech Recognition” by Rabiner (“Rabiner”). Applicant respectfully traverses these rejections.

Applicant respectfully points out that the Utiyama reference supplied by the Examiner bears no date which allows Applicant to independently verify the publication date thereof. The only date supplied to Applicant was that listed on the Notice of References Cited accompanying the Office Action. Therefore, Applicant respectfully requests that the Examiner specifically provide the evidence showing the publication date of Utiyama, or withdraw this publication as a reference against the pending claims.

Notwithstanding the foregoing, and even if the July 2001 date supplied in the Notice of References Cited is correct, Applicant respectfully submits that Blei, Utiyama and/or Rabiner, either separately or combined, do not render the pending claims unpatentable.

Independent claims 1, 10, 11, 12, 21, 22 and 23 all contain a limitation that recites estimating a model parameter using the text itself. Specifically, independent claims 1, 10 and 11 recite, “estimating a model parameter corresponding to a text document as a processing target on the basis of the output of the initial value of the model parameter and only the text document.” Independent claim 12 recites, “estimating a model parameter corresponding to a text document as a processing target on the basis of the initial value of the model parameter output from said model parameter initializing means and only the text document,” and independent claims 21-23 recite “estimating a parameter of a probability model...wherein...the model is fully defined by a model parameter set which is comprised of word output probabilities of words in the topics in the text document and topic transition probabilities.”

In direct contrast to the specific requirements of independent claims 1, 10, 11, 12, 21, 22 and 23, Blei requires training data to estimate a model parameter rather than using the text itself. In fact, page 12 of the Office Action admits that “Blei fails to teach that the EM algorithm operates only on the text document itself (no training data).” The Office Action contends, however, that Utiyama teaches text segmentation without training data, and then concludes that it would have been obvious to one of skill in the art to combine the teachings of Blei and Utiyama in order to utilize the features of Blei without the use of training data.

Such a conclusion, however, is unfounded because Utiyama actually teaches away from such a combination. When contemplating combining the segmentation method of Utiyama with the method of Blei in which training data is available, Utiyama specifically states that “[i]t would be interesting, however, to compare our algorithm with their algorithm for the case when training data are available. In such a case, our model should be extended to incorporate various features such as the average segmentation length, clue words, named entities, and so on.” See Utiyama at page 505, lines 10-16.

By Utiyama’s own admission, using a method such as Blei’s in combination with Utiyama is only contemplated when training data is available. As such, one of skill in the art would not find it obvious to combine Utiyama and Blei and eliminate the need for training data. Quite to the contrary, Utiyama specifically states that training data use would be needed if such a combination were to occur. Thus, it would not have been obvious to one of skill in the art to combine Blei and Utiyama in the absence of training data and estimate a model parameter using the text itself, as required by independent claims 1, 10, 11, 12, 21, 22 and 23.

Rabiner does not remedy any of the deficiencies of Blei and Utiyama. Nowhere within Rabiner is it disclosed, let alone suggested, to estimate a model parameter using the text itself as required by independent claims 1, 10, 11, 12, 21, 22 and 23. Accordingly, it is respectfully submitted that independent claims 1, 10, 11, 12, 21, 22 and 23 patentably distinguish over the art of record.

Claims 2-9 depend either directly or indirectly from independent claim 1 and include all of the limitations found therein. Claims 13-20 depend either directly or indirectly from independent claim 12 and include all of the limitations found therein. Each of these dependent claims include additional limitations which, in combination with the limitations of the claims from which they depend, are neither disclosed nor suggested in the art of record. Accordingly, claims 2-9 and 13-20 are likewise patentable.

In view of the foregoing, favorable consideration and allowance of the present application with claims 1-23 is respectfully and earnestly solicited.

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Respectfully submitted,

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